ORIGINAL
(Red)

Site Assessment CERCLIS & WasteLAN Data Entry Form
EPA Region III – Brownfields & Site Assessment Section (3HS34)

see reverse side for instructions

Site Name: BROOKS INSTRUMENT DIVISION

WasteLAN ID#: 03 DSN: PA-2402 EPA ID#: PAD002482628

Site-Level Data

☐ Edit CERCLIS/WasteLAN Identifying Information (Site Name, Address, City, County, County ID, State, Zip Code)
Explain: _____

☐ Non-NPL Status (to override system-generated value): _____

☐ Site Merge: *Merge into this site: Name:* _____ *ID#:* _____

☐ Archiving: *It has been determined that no further Federal Superfund interest exists at this site based on available information. No further site assessment, remedial, removal, enforcement, cost recovery, or oversight activities are being planned or conducted at this time.*

☑ RCRA Deferral Audit Special Initiative: ☑ Lead Confirmed ☐ New Decision ☐ Further Superfund Assessment

☐ Vermiculite Special Initiative

Action-Level Data

ACTION (mark one or more)	LEAD	START DATE	COMPL. DATE	QUALIFIER
☐ *b* Pre-CERCLIS Survey Assessment (HX)			/ /	
☐ *d* Site Discovery (DS)	F EP S		/ /	
☐ *f* Preliminary Assessment (PA)	F EP S	/ /	/ /	H L N D DN A F W
☐ *h* Site Inspection (SI)	F EP S	/ /	/ /	H L N D DN A F W
☐ *j* Site Inspection Prioritization (SIP)	F EP S	/ /	/ /	H L N D DN A F W
☐ *k* Site Reassessment (SR)	F EP S	/ /	/ /	H L N D DN A F W
☐ *l* Expanded Site Inspection (ES)	F EP S	/ /	/ /	G L N D DN A F W
☐ *g* Federal Facility PA Review (RX)	F EP S	/ /	/ /	H L N D DN A
☐ *m* Federal Facility SI Review (TY)	F EP S	/ /	/ /	H L N D DN A
☐ *n* Federal Facility ESI Review (TZ)	F EP S	/ /	/ /	G L N D DN A
☐ *subaction (g/m/n)*: Returned to Fed. Facility			/ /	
☐ *o* Integrated ESI/RI (ESI/RI)	F EP S	/ /	/ /	G L N D DN A F W
☐ *q* Hazard Ranking System Pkg (HR)	F EP S	/ /	/ /	O N D DN F W
☐ *r* Integrated Assessment (EA)	F EP S	/ /	/ /	H G L N D DN A F W
☐ *p* State Deferral (AQ)	SD	/ /	/ /	RS RT
☐ *t* Other Cleanup Activity (VA)	___	/ /	/ /	H L (*or may leave blank*)
☐ St. Deferral / OCA sub-action (p/t): Comprehensive Site Investigation	___ (SE, SR, S, SN, FF, RP)	/ /	/ /	H L (*or may leave blank*)
☐ St. Deferral / OCA sub-action (p/t): Remedy Selection	___	/ /	/ /	H L (*or may leave blank*)
☐ St. Deferral / OCA sub-action (p/t): Design	___	/ /	/ /	H L (*or may leave blank*)
☐ St. Deferral / OCA sub-action (p/t): Construction	___	/ /	/ /	H L (*or may leave blank*)
☐ St. Deferral / OCA sub-action (p/t): Post-Construction Maintenance	___	/ /	/ /	H L (*or may leave blank*)
☐ St. Deferral / OCA sub-action (p/t): Short Term Cleanup	___	/ /	/ /	H L (*or may leave blank*)
☐ Comfort/Status Letter	FE	/ /	/ /	

type: ☐ No Previous Federal SF Interest ☐ No Current Federal SF Interest ☐ Federal Interest ☐ State Action

Authorization (SAM) Signature & Date	Data Control Clerk Signature & Date	Date Quality Coord. Signature & Date
8/1/00	8/15/00	8/18/00

ORIGINAL
(Red)

R-585-6-9-5

ENVIRONMENTAL PRIORITIES INITIATIVE
PRELIMINARY ASSESSMENT OF
BROOKS INSTRUMENTS DIVISION
PREPARED UNDER

TDD NO. F3-8903-42
EPA NO. PA-2402
CONTRACT NO. 68-01-7346

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 25, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY	REVIEWED BY	APPROVED BY
JOHN YASENCHAK	CARL RODZEWICH	GARTH GLENN
PROJECT MANAGER	SECTION SUPERVISOR	REGIONAL OPERATIONS MANAGER, FIT 3

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APPENDICES

SECTION 1

1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-7346. This specific report was prepared in accordance with Technical Directive Document No. F3-8903-42 for the Brooks Instruments Division site, located in Hatfield, Montgomery County, Pennsylvania.

1.2 Scope of Work

NUS FIT 3 was tasked to conduct an Environmental Priorities Initiative (EPI) preliminary assessment of the subject site.

1.3 Summary

Brooks Instruments Division is located on West Vine Street in Hatfield, Montgomery County, Pennsylvania. The company is a subsidiary of Emerson Electronics, based in St. Louis, Missouri. Operations at the site, which began in 1967, consist of manufacturing small precision instruments. The site is approximately five acres in size and consists of one main building and a maintenance shed located north of the main building. Adjacent to the shed is the hazardous waste storage area for the facility. A pond is located north of the storage area.

Surface water for the site is expected to drain into a storm sewer drain located on the northern boundary of the site. Surface water then enters West Branch Neshaminy Creek 2,000 feet south of the subject site via the storm sewer drain. Water supply for the three-mile radius is supplied by three public water supply companies and domestic wells. The water supply companies utilize groundwater wells within the 3-mile radius, serving approximately 100,000 people. The closest well is located 0.6 mile southeast of the site.

Wastes generated at the subject site include spent trichloroethene (TCE), used for degreasing, and the spent solvents xylene, toluene, and acetone. On August 18, 1980, the company submitted a Part A Hazardous Waste Permit Application for the subject site. On November 19, 1980, the company submitted a Notification of Hazardous Waste Activity to EPA. Identified wastes that the facility could handle on an interim basis were subsequently identified as F001, U228, F003, U002, and U151 waste streams. On April 20, 1984, the company was notified by the Pennsylvania Department of Environmental Resources (PA DER) that the facility was not a treatment, storage, and disposal (TSD) facility and the company would not have to submit a Part B Hazardous Waste Permit Application.

Currently, wastes on site are stored in a fenced area adjacent to the maintenance shed north of the main building. This area began accepting wastes in 1980. Before 1980, wastes were stored under an extension of the western portion of the building, where the virgin TCE is currently stored.

Before 1980, a TCE spill north of the current hazardous waste storage area was reported by the company. The amounts and the exact date of the spill are unknown. As a result, Brooks Instruments installed two monitoring wells, a recovery well, and an air stripper on the site.

NUS FIT 3 visited the site on April 18, 1989. While on site, FIT 3 identified four solid waste management units (SWMUs): the hazardous waste storage area, the old hazardous waste storage area, the underground waste oil tank, and the groundwater recovery and air-stripper systems. For a more detailed description of the SWMUs identified, please refer to section 4.0 of this report.

SECTION 2

2.0 THE SITE

2.1 Location

The site is located on 407 West Vine Street in Hatfield, Montgomery County, Pennsylvania (see figure 2.1, page 2-2). The site is located at longitude 75° 15' 7" west and latitude 40° 15' 15" north on the United States Geological Survey (U.S.G.S.) Telford, Pennsylvania quadrangle. The site can also be found by measuring seven inches west and four inches north of the southeastern corner of the Telford, Pennsylvania quadrangle.[1]

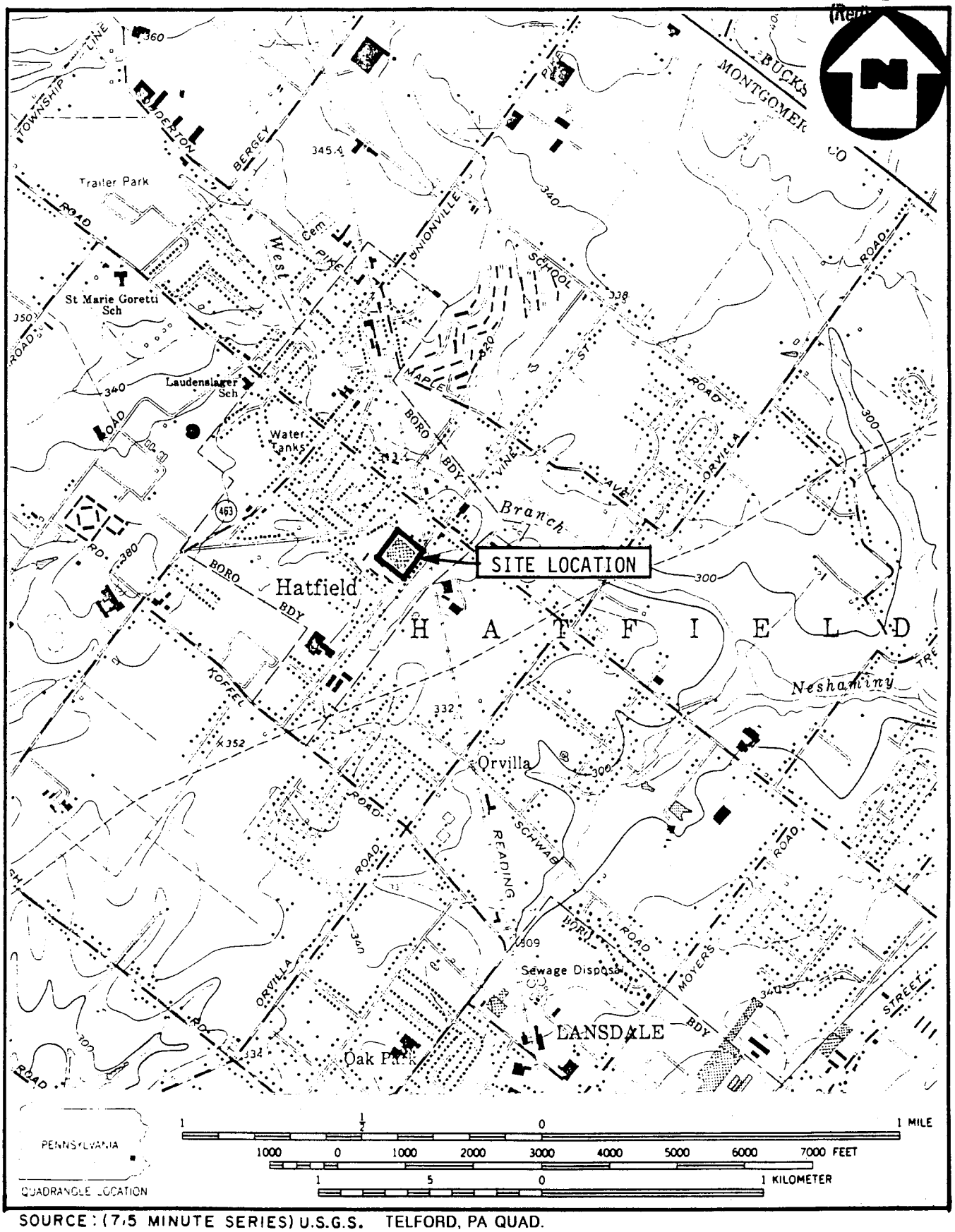
2.2 Site Layout

The approximately 5-acre site consists of one 400,000-square-foot main building, where small precision instruments are manufactured and office-related duties are performed, and a maintenance shed, approximately 10 by 10 feet in size, located north of the building. A fenced area in front of the shed, approximately 10 by 3 feet in size, is the current hazardous waste storage area used by the facility (see figure 2.2, page 2-3). This area has a concrete base and is diked. Directly north of the shed is an air stripper utilized to strip TCE from a 327-feet-deep recovery well (well no. 3). The water that passes through the stripper enters a pond via a polyvinyl chloride (PVC) pipe north of the stripper. The shallow pond is approximately 1/10 acre in size. The pond is unlined; water flows directly from the outfall into the pond. The water then enters a storm sewer that runs to the southeast toward Vine Street and into West Branch Neshaminy Creek, located 2,000 feet southeast of the site. West Branch Neshaminy Creek flows perpendicular to Vine Street.[2]

A TCE storage tank, with a holding capacity of 275 gallons, is located adjacent to and behind the main building. The tank is contained in an above-ground concrete basin that is about four feet high. Parking lots are located east and west of the site. A 3,000-gallon underground steel tank used to store waste oil is located west of the maintenance shed and south of the air stripper. The remaining area of the site is composed of fields.[2]

Two monitoring wells (MWs) are located on site. MW no. 2 is located west of the air stripper and is 140 feet deep. MW no. 1 is located in the northwestern part of the subject site and is 126 feet deep. Monitoring well no. 2, closest to the air stripper, is located directly on the area of the TCE spill, northeast of the hazardous waste storage area.[2]

ORIGINAL



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. TELFORD, PA QUAD.

SITE LOCATION MAP

BROOKS INSTRUMENTS DIVISION, HATFIELD, PA

SCALE 1: 24000

FIGURE 2.1

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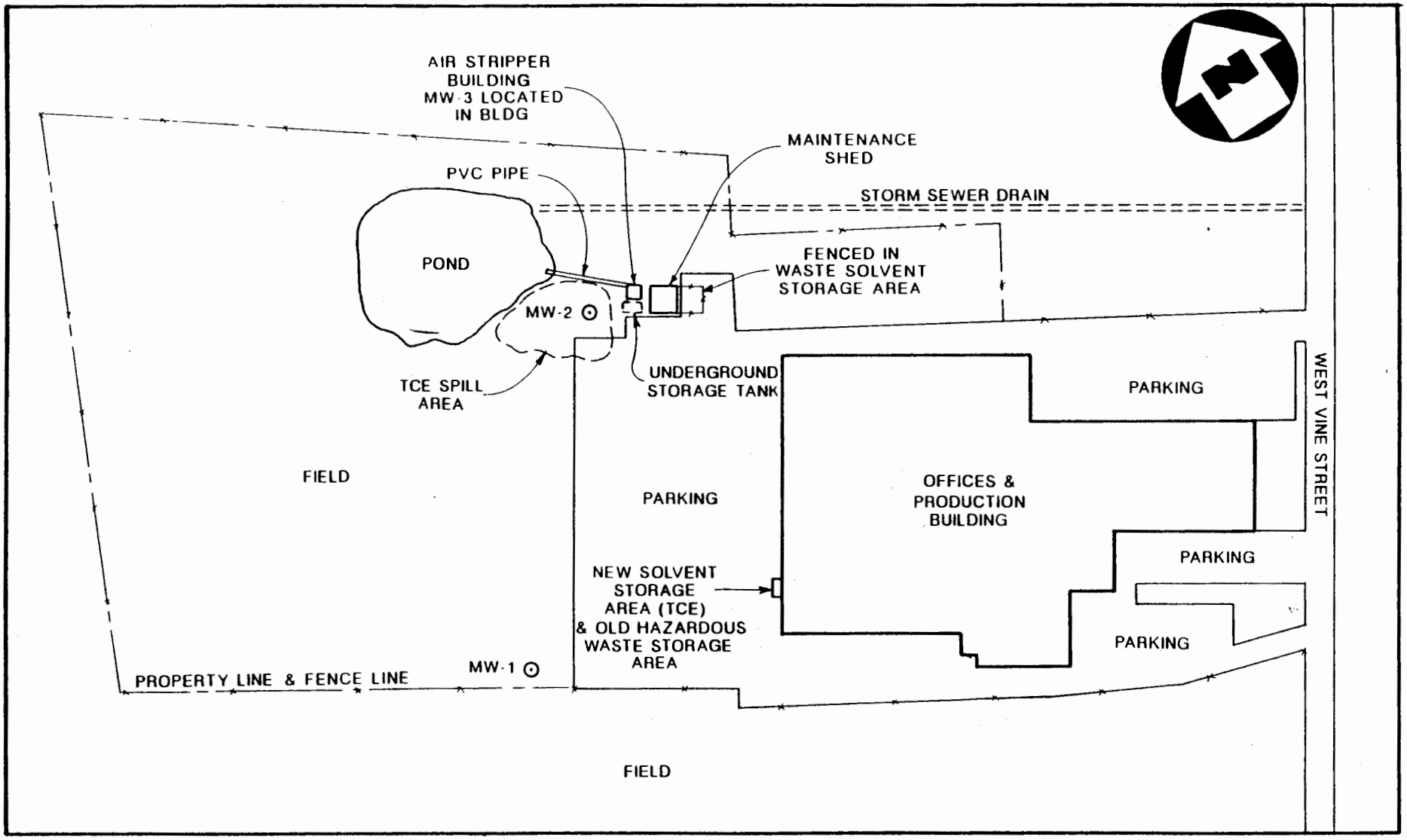

SITE SKETCH

BROOKS INSTRUMENTS DIVISION, HATFIELD, PA

(NO SCALE)

FIGURE 2.2

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A fence surrounding the entire property restricts access, except on the side of the facility adjacent to Vine Street. The entrance to the plant is located on Vine Street. The site is surrounded by residential areas on all sides and farm fields to the north of the site.[2]

2.3 Ownership History

Brooks Instruments Division is a subsidiary of Emerson Electronics, based in St. Louis, Missouri. Brooks has operated at the West Vine Street location since 1957. Prior ownership of the property is unknown. Paul Smith, the manager of the plant, stated that a silk mill operated at the address before Brooks' acquisition; however, details about ownership are unknown.[3]

2.4 Site Use History

Brooks Instruments Division is a manufacturer of small precision instruments, including control valves, water meters, level meters, and flow meters. The pieces for the instruments are dipped in a solvent tank for degreasing. The waste solvent is drummed and stored in the hazardous waste storage area by the maintenance shed for less than 90 days. Before Brooks owned the property, the site was utilized as a silk mill. The use of the site before the silk mill is unknown.[3]

2.5 Permit and Regulatory Action History

On November 19, 1980, the company submitted a Part A Hazardous Waste Permit Application to EPA for the subject site. On August 13, 1980, the company filed a Notification of Hazardous Waste Activity (see appendix A). At the time, the facility, assigned EPA ID No. PAD002482628, began storing wastes on site under interim status.[4] On July 20, 1981, EPA acknowledged the company's Part A submission. Identified hazardous wastes that the facility could handle were classified as F001, U228, F003, U002, and U151. Process codes that the facility could use were identified as S01, S02, and T01 (see appendix B).[5]

On April 20, 1984, the company was notified by PA DER that the facility was not a TSD facility and the company would not have to submit a Part B Hazardous Waste Permit Application.[5] The Part A application previously submitted was returned to the company. Interim status as a TSD facility for the company was subsequently withdrawn (see appendix B).[6]

Inspections made by PA DER on March 27, 1984, July 28, 1987, and November 8, 1988 indicated minor violations by the facility, including improper labeling of drums, unavailable manifests, and lack of a personnel training program. All violations were corrected by the facility in the required time period.[7]

At an unknown date, a spill of TCE occurred on site northeast of the present hazardous waste storage area. The amount and source of the spills is unknown. The spill resulted in groundwater contamination of the area. An air stripper and recovery well, installed by SMC Martin, Incorporated in 1981, are located behind the hazardous waste storage area. They are used to remove TCE from groundwater pumped from the recovery well. The stripper's outfall is registered by the Delaware Valley Water Authority (no. 011577) because of the large amount of water discharged indirectly into the Delaware River. No NPDES permit has been issued for the unit.[8]

Two monitoring wells, installed by SMC Martin, Incorporated in 1981, are located west of the air stripper. Both wells indicate high levels of TCE in the groundwater. Samples of both wells are taken quarterly by BCM Laboratory, and the results are sent to PA DER. Samples of MW no. 1, located northwest of the subject site, collected on March 27, 1989, revealed concentrations of 78.1 ug/l of TCE. MW no. 2, located in the area of the TCE spill, indicated concentrations of 1,040 ug/l of TCE (see appendix C).[7]

2.6 Remedial Action to Date

In 1981, after a TCE spill, Brooks contracted SMC Martin to install two monitoring wells, a recovery well, and an air stripper behind the main office building of the property. The wells are sampled quarterly by BCM, Incorporated. The results of samples collected on March 27, 1989 indicated the following: MW no. 1, located on the northwestern part of the property, showed TCE concentrations of 78.1 ug/l; the recovery well showed TCE concentrations of 61.7 ug/l before the air stripper and less than 1 ug/l after the air stripper; and MW no. 2, located on the spill area, showed TCE concentrations of 1,040 ug/l (see appendix C). The monitoring wells are 126 and 140 feet deep, respectively. The recovery well is 327 feet deep and, as determined duing tests by SMC Martin, pumps 43,000 gallons per day through the air stripper.[7,9]

SECTION 3

3.2 Surface Waters

All surface water from the site is expected to drain into a pond that flows into a storm sewer drain located on the northeastern section of the site. The pond originated from the outfall of the air stripper, which strips TCE from a recovery well on site. The shallow pond is approximately 1/10 acre in size. The storm sewer drain empties the water into West Branch Neshaminy Creek, a perennial creek located approximately 2,000 feet south of the site. West Branch Neshaminy Creek flows eastwardly through the study area and is used for recreational purposes. No surface water intakes are located downgradient of the site within a three-mile radius. No wetland areas greater than five acres in size are located within a three-mile radius of the site.[1]

3.3 Hydrogeology

The geologic and hydrogeologic conditions in the study area were researched as part of the site investigation. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

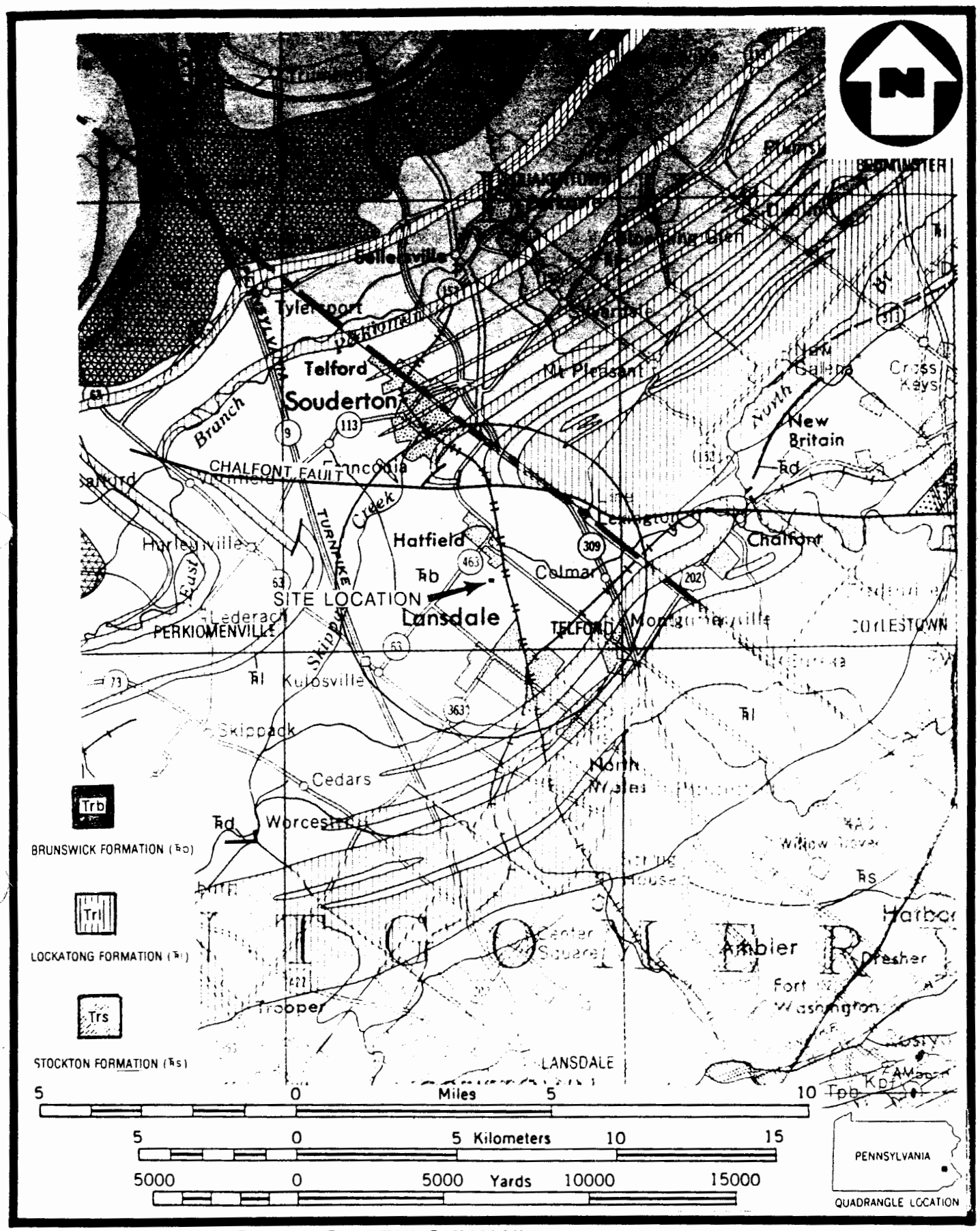
3.3.1 Geology

The Brooks Instruments Division site is situated within the Triassic Lowlands Section of the Piedmont Physiographic Province.[17] The rocks of this Triassic Section are more commonly known as the Newark Group, a 16,000- to 20,000-foot section of nonmarine sedimentary rocks and associated intrusive and extrusive basic rocks.[19] The Newark Group was deposited in the Newark Basin, which was part of a fracture system initiated by the widening of the Atlantic Basin and separation of the continents in Mesozoic time.[19,20] The site area has a dendritic drainage pattern and a topography of broad, shallow valleys and rolling hills.[21]

The structural history of the Newark Basin can be applied to all six Triassic rift valleys that stretch from Nova Scotia to North Carolina. This half-graben basin was created during the Palisade Disturbance, the orogenic event that ended the Appalachian Orogeny in late Triassic time. The shape and extent of the original depositional basin were very similar to the present form of the outcrop belt and closely follow the regional grain of Appalachian structures.[18] Continuous downfaulting along the northwestern border has produced a regional dip of 10 to 20 degrees northwest.[20] The Chalfont Fault, located 1.8 miles north of the site, is a normal fault that has displaced the Triassic age formations in the study area.[16]

The site is underlain by the late Triassic age Brunswick Formation (see figure 3.1, page 3-4).[15] The Brunswick Formation consists of a monotonous succession of reddish-brown mudstone and siltstone with local beds of claystone and fine-grained sandstone. The formation also contains abundant dinosaur footprints, along with bony fish, reptilian, and plant fossils. These fossils suggest a broad mudflat paleoenvironment with wandering water courses and weak external drainage. Long, warm climatic cycles produced episodes of a dry, oxidizing environment (resulting in thick sequences of ferric-oxide-rich mud) alternating with moister periods (resulting in dark gray mud accumulation). The abundant ferric-oxide pigment in the mud suggests considerable weathering in the northwest upland source area. The thickness of the Brunswick is approximately 6,000 feet.[19]

Narrow bands of the Triassic age Lockatong Formation are exposed on the southeastern and northeastern sections of the study area.[15] The Lockatong Formation is composed of alternating detrital and chemical sediments. The detrital sediments consist of shales succeeded by platy dark carbonate-rich mud and argillite with the occasional ripple-bedded siltstone and sandstone. The chemical sediments consist of dark gray-black dolomitic mudstones succeeded by gray carbonate-rich argillite. The fossil content of the formation includes fish, labyrinthodont amphibians, fresh-water ostracods, and mollusks. These fossils, in addition to the cyclic detrital and chemical sediments, suggest a lacustrine paleoenvironment for the Lockatong. This ancient lake was stable for millions of years, although there were repeated expansion and waning of its areal extent.[19]



SOURCE: GEOLOGIC MAP OF PENNSYLVANIA

FIGURE 3-1

GEOLOGIC MAP

BROOKS INSTRUMENTS DIVISION SITE

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The Lockatong Formation is contemporaneous with the lower-middle portion of the Brunswick Formation. This means that, while the Lockatong Formation was being deposited in the center of the Newark Basin, early Brunswick Formation sedimentation was occurring at the basin margins. When the Lockatong lake dried up, Brunswick Formation sedimentation continued throughout the basin. Given the unique depositional environment of the Lockatong, its thickness varies widely. Estimates range from 3,750 feet near the Delaware River (15 miles northeast of the site) to only tens of feet west of Phoenixville (17 miles southwest of the site), where the formation pinches out.[19]

3.3.2 Soils

The northwestern half of the site is underlain by an Abbottstown Series soil. This soil (AbB2 - three to eight percent slopes, moderately eroded) is a deep, somewhat poorly drained silt loam that formed in material weathered from red and brown shale and sandstone. A representative profile consists of a top 10 inches of a dark reddish-gray silt loam, 3 inches of a reddish-brown silt loam, 14 inches of a reddish-brown heavy silt loam, 12 inches of a weak-red shaly silt loam, and 9 inches of a reddish-brown shaly silt loam. This soil is slowly permeable, has a high moisture-holding capacity, and a pH range of very strongly acid to medium acid (4.6 to 5.7).[22]

The southeastern half of the site is underlain by Readington Series soils. This soil (ReB2 - three to eight percent slopes, moderately eroded) is a deep, moderately well-drained silt loam that formed in material weathered from shale, siltstone, and sandstone. A representative profile consists of a top 8 inches of a dark grayish-brown silt loam, 7 inches of a brown silt loam, 14 inches of a reddish-brown fine silt loam, 4 inches of a reddish-brown shaly clay loam, 7 inches of a reddish-brown shaly, fine silt loam to silty clay loam, and 4 inches of a weak-red shaly silt loam. This soil has a moderately slow permeability, a moderate to high available moisture capacity, and a pH range of very strongly acid to medium acid (4.5 to 6.0).[22]

3.3.3 Groundwater

The Brunswick Formation has a moderate to low permeability and a moderate secondary porosity due to vertical joints and bedding-plane fractures that have been enlarged by solution.[22] The Brunswick contains water under water-table and semi-artesian conditions in the weathered zone of the formation, which may extend to 600 feet or more. Wells in the Brunswick in Montgomery County range in depth from 90 to 916 feet. Well yields range from 24 to 220 gpm, with an average of 40 gpm.[21]

The direction of shallow groundwater flow is to the northeast, toward the West Branch of Neshaminy Creek. Flow direction is based upon topographical observations and the role of streams as discharge points for groundwater.

3.4 Climate and Meteorology

The site is subject to a climate characterized by warm, humid summers, moderately cold winters, and ample rainfall. The average annual temperature is 57°F. The coldest month is January, with a mean temperature of 77°F. The annual mean lake evaporation is 35 inches. The average annual precipitation is 42 inches. The wettest month is April, and the driest month is August. The annual net precipitation is approximately seven inches. The 1-year, 24-hour rainfall event for the study area is approximately 2.25 inches.[23,24,25]

3.5 Land Use

The surrounding land is mostly commercial and residential. The subject site is approximately 1,500 feet from Main Street in Hatfield, Pennsylvania. Directly south and east of the site are residential areas. To the north are fields and a farm, and to the west is a field.[2]

3.7 Critical Environments

Based on information obtained from the United States Department of the Interior, Fish and Wildlife Service, there is no indication that any endangered species reside within a three-mile radius of Brooks Instruments Division.[25]

SECTION 4

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4.0 WASTE TYPES AND QUANTITIES

The hazardous wastes generated on site have been classified by the facility as including the following EPA RCRA waste identification numbers: F001 (specified spent halogenated solvents used in degreasing), F003 (specified nonhalogenated solvents), F017 (paint wastes), F018 (paint wastes), U228 (trichloroethene), U002 (acetone), and U151 (mercury). The waste codes present may not totally represent all wastes present at the site. At the time that the Notification of Hazardous Waste Activity was filed, approximately 2,500 pounds per year of F001 and U228 wastes, 900 pounds per year of F003 and U002 wastes, 5,000 pounds per year of F017 and F018 wastes, and 50 pounds per year of U151 wastes were generated at the facility. In 1981, the F017 and F018 waste streams were determined to be nonhazardous by EPA. According to a 1987 PA DER hazardous waste inspection report, the facility only generated approximately 10,583 pounds per year of F001, F003, F005 (specified nonhalogenated solvents), and D001 (ignitable wastes) waste streams (see individual SWMU sections for more details).[4,7]

The facility has sent its wastes to a variety of TSD facilities. Wastes have been sent to Spectron, Incorporated, in Elkton, Maryland, Northeast Environmental Services, in Canastota, New York, and Resource Technology, in Conshohocken, Pennsylvania. The wastes are currently sent to Waste Conversion, Incorporated, in Hatfield, Pennsylvania.[6,27]

4.1 Solid Waste Management Units

Four SWMUs have been identified for the site:[2]

- hazardous waste storage area
- old hazardous waste storage area
- underground waste oil tank
- groundwater recovery and air-stripper systems

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4.1.1 SWMU No. 1

Hazardous Waste Storage Area

The hazardous waste storage area is located on the northern portion of the site (see figure 4.1, page 4-3). The storage area is located under an extension of the maintenance shed. The area, which is approximately 10 by 25 feet in size, is surrounded by a chain-link fence on 3 sides. The wastes are stored in this area for less than 90 days. The facility generated 10,583 pounds of waste per year; therefore, this waste is expected to be stored in this area prior to shipment off site. Waste Conversion, of Hatfield, Pennsylvania, is the current transporter and TSD facility that is utilized.[2,7,28]

Date of Start-Up

The hazardous waste storage area was constructed in 1980.[28]

Date of Closure

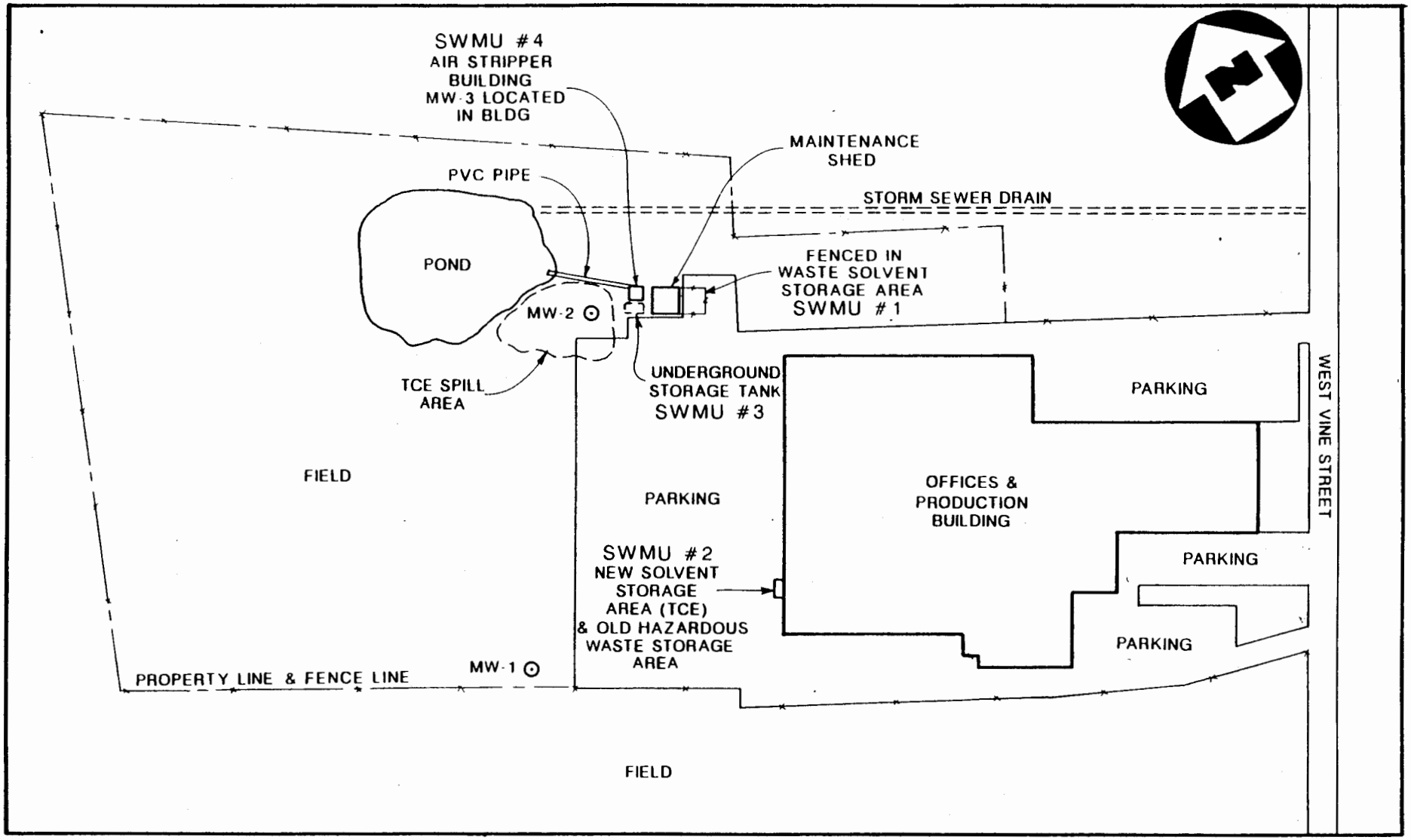
There is no tentative closure date for the hazardous waste storage area.[28]

Wastes Managed

The wastes stored in this area include spent halogenated and nonhalogenated solvents. TCE, which has a specific waste code of U228, is a halogenated solvent generated on site. The halogenated solvents are designated as F001 wastes by EPA. The nonhalogenated solvents generated on site, which are designated as F003 and F005 wastes by EPA, include acetone, which has a specific waste code of U002, toluene, and xylene. The halogenated and nonhalogenated solvents are also classified as D001 wastes for ignitability.[7,28]

Release Controls

The wastes stored in this area are contained in sealed 55-gallon drums, which offer primary containment. The area, which is approximately 10 by 25 feet in size, is surrounded by a chain-link fence on 3 sides; the gate is kept locked. The storage area has a concrete floor with a surrounding 10-inch dike. The dike and the concrete floor, which has no drain, offer secondary containment for the unit. No fire-protection devices were observed.[2]



SOLID WASTE MANAGEMENT UNIT LOCATIONS
BROOKS INSTRUMENTS DIVISION, HATFIELD, PA
(NO SCALE)

FIGURE 4.1

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ORIGINAL

History of Releases

No releases from this area have been reported. There was evidence of spills in the storage area, but there was no evidence of any release outside the containment area. No OVA readings above background were recorded at the fence surrounding the unit.[2,28]

4.1.2 SWMU No. 2

Old Hazardous Waste Storage Area

Hazardous waste was stored under a extension of the western portion of the building (see figure 4.1, page 4-3). The virgin TCE is currently stored in this area. This area was used to store waste for 90 days or more, since it operated under interim status. At the time the Notification of Hazardous Waste Activity was filed, approximately 2,500 pounds per year of F001 and U228 wastes, 900 pounds per year of F003 and U002 wastes, 5,000 pounds per year of F017 and F018 wastes, and 50 pounds per year of U151 wastes were generated at the facility. In 1981, the F017 and F018 waste streams were deemed nonhazardous by EPA. It is believed that all of the above wastes, with the exception of U151, were at one time stored in this area. The U151 waste, mercury, according to the site representative, was shipped off site as generated.[28]

The facility has sent its wastes to a variety of TSD facilities. Wastes have been sent to Spectron, Incorporated, in Elkton, Maryland, Northeast Environmental Services, in Canastota, New York, and Resource Technology, in Conshohockon, Pennsylvania.[3,6,27,28]

Date of Start-Up

This storage area was first used when the facility began operations in 1957.[3,28]

Date of Closure

Utilization of this storage area for hazardous waste storage was halted when the new hazardous waste storage area was constructed in 1980.[27,28]

Wastes Managed

The same types of wastes that are stored in the new hazardous waste storage area were stored in the old hazardous waste storage area. The halogenated solvent TCE (F001 and U228) and the nonhalogenated solvents (F003 and F005) acetone (U002), toluene, and xylene were stored in this area.[3,28]

Release Controls

Primary containment for wastes stored in this area was provided by 55-gallon drums. The drums were stored in an approximately 25- by 15-foot area located under an extension of the building. The old storage area had a concrete floor that offered secondary containment. The concrete floor did not have any type of dike to contain any spills.[2,3,28]

History of Releases

No releases from this area have been reported. No evidence of spills or releases was observed during the site visit. OVA readings approximately 5 ppm above background were recorded above the virgin solvent tank but nowhere else in the unit.[2,3,28]

4.1.3 SWMU No. 3
Underground Waste Oil Tank

A 3,000-gallon steel tank, coated with asphalt, is buried approximately 15 feet west of the western corner of the maintenance shed/hazardous waste storage area (see figure 4.1, page 4-3). The tank is utilized for the temporary storage of waste oils generated in the plant. The level of the tank is occasionally checked with a dipstick.[2,3,28]

Date of Start-Up

According to the site representative, the tank was installed and first utilized in 1980.[2,3,28]

Date of Closure

There is no tentative date for closure of the waste oil tank.[3,28]

Wastes Managed

The underground tank is used to store waste oil. The waste oil is considered to be nonhazardous, but at least one shipment has been hazardous due to elevated levels of lead (F008).[3,7,28]

Release Controls

Primary containment is offered by the 3,000-gallon steel tank that holds the waste oil. The tank has no secondary containment.[2,3,28]

History of Releases

No release from this area have been reported. No evidence of spills or releases was observed during the site visit. No OVA readings above background were recorded in this area.[2,3,28]

4.1.4 SWMU No. 4
Groundwater Recovery and Air-Stripper Systems

The facility apparently had a TCE spill in or before 1980. According to the site representative, the quantity or extent of the spill is not known. Apparently, as a response to the spill, the facility installed monitoring wells, a recovery well, and a TCE air stripper. The recovery well and air stripper are located northwest of the maintenance shed (see figure 4.1, page 4-3). The recovery well pumps approximately 43,000 gallons per day (gpd). The TCE (F001) is volatilized by the air stripper.[2,3,28]

Date of Start-Up

The groundwater recovery system was installed in 1981.[28]

Date of Closure

There is no tentative date for closure of the air stripper.[28]

Wastes Managed

A 6-inch-diameter, 327-feet-deep recovery well pumps TCE-contaminated water at a rate of up to 39 gpm. Monitoring wells in the contaminated area revealed levels of up to 1,040 ug/l TCE and 49 ug/l tetrachloroethene.[9,28]

Release Controls

Contaminated groundwater is continuously pumped out and run through an air stripper to volatilize contaminants at a rate of approximately 43,000 gpd. Before and after air stripping, groundwater is analyzed on a quarterly basis in order to insure proper volatilization (see appendix C). The stripper is a 10-feet-high steel tank. This steel tank provides primary containment. The stripper is located on top of a concrete pad; however, there is no dike around the concrete pad.[2,28,29]

History of Releases

The air stripper was put into operation in order to recover contaminated groundwater caused by an apparent TCE spill prior to 1980. The FIT was unable to find any specific information on the spill, but a file search is to be conducted, and the pertinent information will be added to the final report.[2,28]

SECTION 5

ORIGINAL (Red)

5.0 FIELD TRIP REPORT

5.1 Summary

On April 11, 1989, NUS FIT 3 members John Yasenchak and Michael Heffron performed an EPI preliminary assessment of the Brooks Instruments Division at 407 West Vine Street in Hatfield, Montgomery County, Pennsylvania. Access to the site and permission to take photographs were granted by Paul Smith, the manager of the plant. The weather conditions during the site visit were sunny, with temperatures in the mid- to upper 50s. Photographs were taken on site (see figure 5.1, page 5-3, and the photograph log, section 5.4).

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Paul Smith
Manager
Brooks Instruments Division
407 West Vine Street
Hatfield, PA 19440
(215) 362-3581

5.2.2 At the Site

Paul Smith
Manager
Brooks Instruments Division
407 West Vine Street
Hatfield, PA 19440
(215) 362-3581

5.3 Site Observations

- The OVA background reading was 2 ppm. An OVA reading of approximately 5 ppm was recorded near the solvent storage tank. No other OVA readings were recorded.
- The mini-alert was set at the X1 position. No readings were recorded above background.
- A storm sewer drain was observed at the northeastern part of the site. The drain emptied into Little Neshaminy Creek and accepted outfall from the air stripper.
- An air-stripper was located behind the maintenance shed located in the northeastern part of the site.
- A hazardous waste storage area was located adjacent to the front of the maintenance shed.
- A TCE tank was located behind the main building. It was contained in a concrete basin.
- Two monitoring wells were observed west of the air stripper.
- A pond is located by the outfall from the stripper.

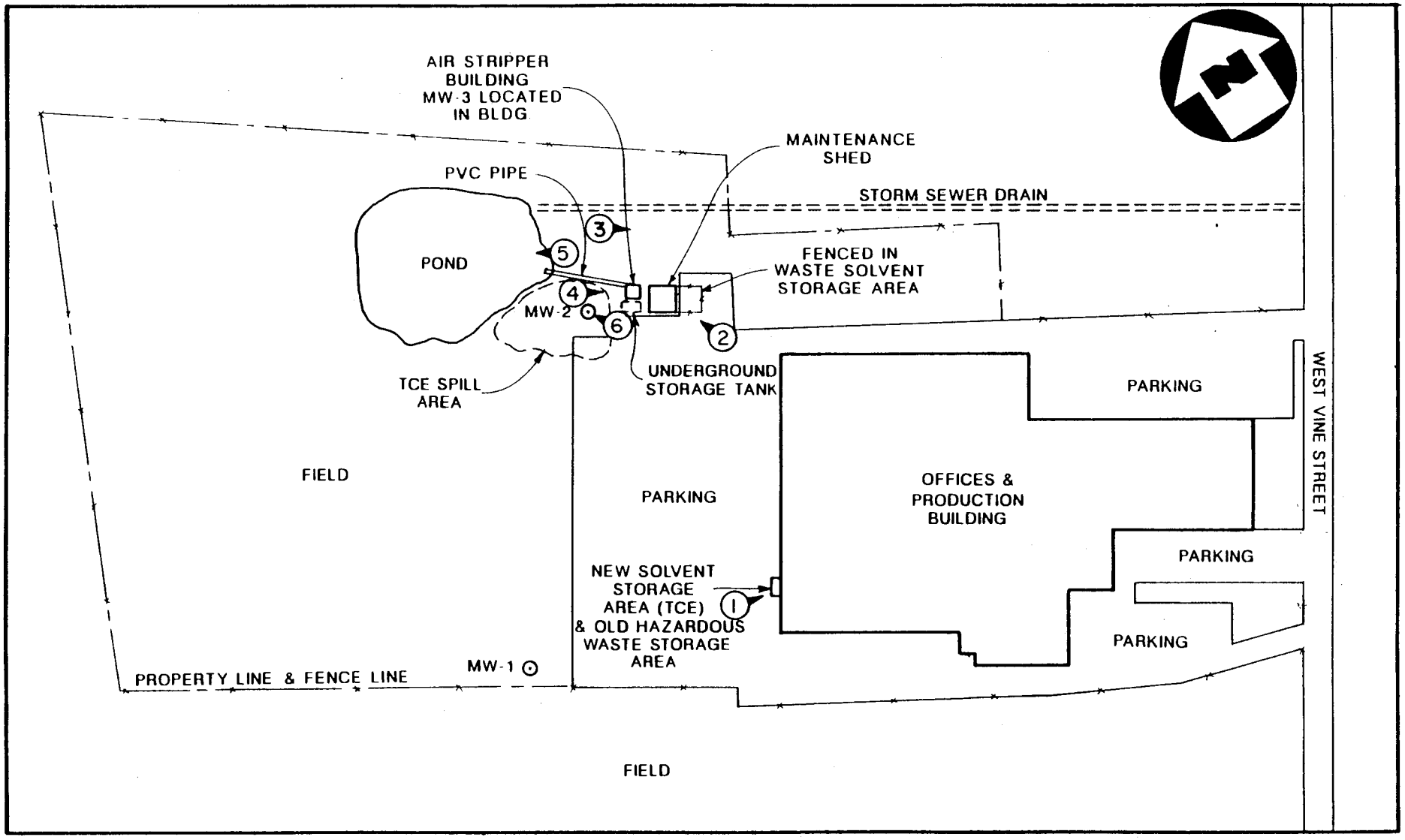

PHOTO LOCATION MAP

BROOKS INSTRUMENTS DIVISION, HATFIELD, PA

(NO SCALE)

FIGURE 5.1

NUS CORPORATION

5.4 PHOTOGRAPH LOG

PHOTO #1 - Photo of TCE storage tank
ORIGINAL
(Red)

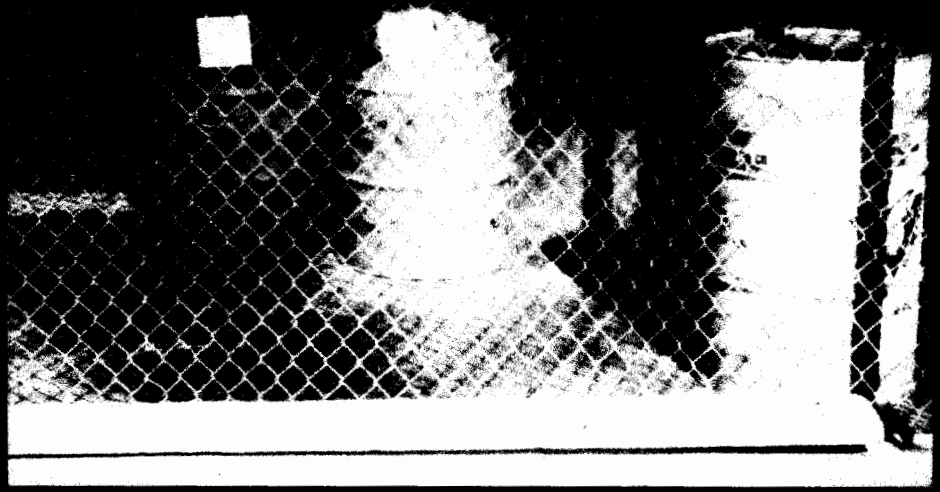

PHOTO #2 - Photo of hazardous storage area
ORIGINAL
(Red)

PHOTO #3 - Photo of outfall after air stripper
ORIGINAL (Red)

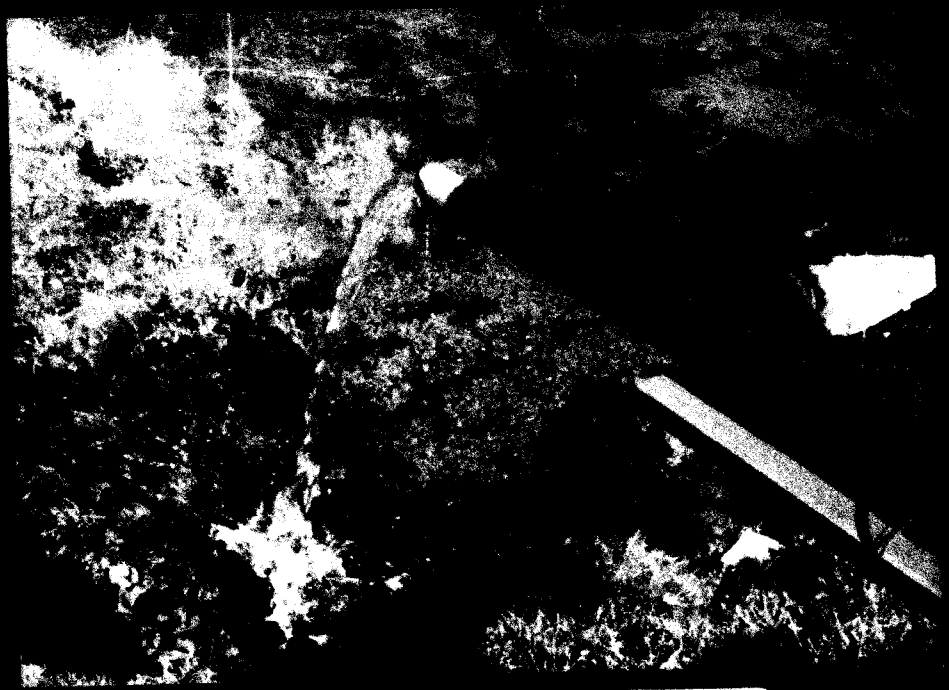

PHOTO #4 - Photo of outfall after air stripper
ORIGINAL (Red)

PHOTO #5 - Photo of monitoring well #2

ORIGINAL
(Red)

PHOTO #6 - Photo of storm sewer drain with facility in the back

ORIGINAL
(Red)

BCM Laboratory Division
1850 Gravers Road
Norristown, PA 19401
(215) 275-0281

PLEASE REMIT CHECKS TO:
BCM Eastern Inc.
1 PLYMOUTH MEETING
PLYMOUTH MEETING, PA 19462
215-825-3800

FINAL REPORT
This is a final report.
The results have been checked and authorized for release.

CLIENT

Brooks Instruments Division
Attn: Paul Smith
407 West Vine Street
Hatfield, PA 19440

Date : 03/27/89
BCM # : 00-7011-41
P.O.# :
Order# : 26726

BCM Number : 907322
Location : WELL #2
Client ID :

Date Sampled : 03/11/89
Date Received : 03/14/89
Sampler :

Test Description	Results	Units	Test Method
Trichloroethylene/Perchlorethylene by J. DENNING on 03/18/89			EPA # 8010
Tetrachloroetnene (PCE)	49.0	ug/l	
Trichloroethene (TCE)	1040	ug/l	

BCM Laboratory Division
1850 Gravers Road
Norristown, PA 19401
(215) 275-0281

FINAL REPORT

PLEASE REMIT CHECKS TO:
BCM Eastern Inc.
1 PLYMOUTH MEETING
PLYMOUTH MEETING, PA 19462
215-825-3800

ORIGINAL (Red)

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BCM Number : 907322
Location : WELL #2
Client ID :

Date Sampled : 03/11/89
Date Received : 03/14/89
Sampler :

Test Description	Results	Units	Test Method

End of Report

Certified by : _____

BCM Laboratory Director

Lab Certifications:

PA - 46-007 NJ - 77175 EPA BULK ASBESTOS QC - 3339
AL - 41300 MD - 136

ORIGINAL
(Red)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2402

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- _ A SOLID
- _ B POWDER, FINES
- _ C SLUDGE
- _ D OTHER (Specify)
- _ E SLURRY
- X F LIQUID
- _ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS 5/90 days

03 WASTE CHARACTERISTICS (Check all that apply)

- X A TOXIC
- _ B CORROSIVE
- _ C RADIOACTIVE
- _ D PERSISTENT
- _ E SOLUBLE
- _ F INFECTIOUS
- _ G FLAMMABLE
- _ H IGNITABLE
- _ I HIGHLY VOLATILE
- _ J EXPLOSIVE
- _ K REACTIVE
- _ L INCOMPATIBLE
- _ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	275	gallons	Average for 90 days.
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	trichloroethene	79-01-6	Stored in	unknown	unknown
SOL	xylene	1330-20-7	drums for	unknown	unknown
SOL	toluene	108-88-3	less than	unknown	unknown
SOL	acetone	67-64-1	90 days.	unknown	unknown

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	trichloroethene	79-01-6	FDS		
FDS	xylene	1330-20-7	FDS		
FDS	toluene	108-88-3	FDS		
FDS	acetone	67-64-1	FDS		

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Hazardous Waste Application Part A, August 18, 1980.

NUS FIT 3. Preliminary assessment; site visit. April 11, 1989.

Smith, Paul, Brooks Instrument Division, with Michael Heffron, NUS FIT 3. Meeting. April 11, 1989.

F3-8903-42

ORIGINAL (Red)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2402

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Brooks Instrument Division	407 West Vine Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Hatfield	PA	19440	Montgomery	91	05
09 COORDINATES LATITUDE: 40° 15' 15" N	LONGITUDE: 75° 15' 07" W				

10 DIRECTIONS TO SITE (Starting from nearest public road)

Take West Vine Street right off Main Street in Hatfield. Brooks is at 407 on the right side of the street.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
Emerson Electric Company	8100 West Florissant Avenue			
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**	
St. Louis	MO	63136	(314) 553-2000	
07 OPERATOR (If known and different from owner)	**08 STREET** (Business, mailing, residential)			
Brooks Instrument Division	407 West Vine Street			
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**	
Hatfield	PA	19440	(215) 362-3641	

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3001 DATE RECEIVED: 8 / 18 / 80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___ / ___ / ___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 4 / 11 / 89 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): NUS FIT 3

02 SITE STATUS (Check one)	03 YEARS OF OPERATION		
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	1957 (BEGINNING YEAR)	present (ENDING YEAR)	☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

TCE, which is used as a degreaser, has contaminated the groundwater in the area. Known solvents used in the facility are toluene, acetone, and xylene.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

TCE has contaminated the groundwater in the area. Public wells located within 3 miles supply water for the area. The facility admits to a spill of TCE prior to 1980. All hazardous wastes are currently stored in a diked concrete area for less than 90 days.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency Organization)			03 TELEPHONE NUMBER
Karen Graham	U.S. EPA			(215) 597-2317
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
John A. Yasenchak	NUS Corp.	FIT 3	(215) 687-9510	5 / 12 / 89 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

ORIGINAL
(Red)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2402

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION — 02 X OBSERVED (DATE: unknown) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000/3 mile — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous storage area prior to 1980. On-site monitoring wells showed concentrations of 78.1 ug/l and 1,040 ug/l on March 27, 1989. A well located 0.6 mile from the site is used by North Penn Water Authority as a public supply well.

01 X B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — X POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,800/1 mile — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous storage area prior to 1980. Site drainage flows into a storm sewer drain emptying into West Branch Neshaminy Creek. The potential for contamination of the creek exists. The West Branch of Neshaminy Creek is used for recreation.

01 X C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — X POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,800/1 mile — 04 NARRATIVE DESCRIPTION

Twenty-two pounds of TCE are released from the air-stripping process per day into the air after the water from the recovery well is volatilized. No containment for these volatiles was observed at the time of the site visit.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No explosive or fire conditions were observed.

01 X E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — X POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,800/1 mile — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous waste storage area prior to 1980. Access on the Vine Street side of the site is unrestricted.

01 X F. CONTAMINATION OF SOIL — 02 X OBSERVED (DATE: Unknown) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: <5 (Acres) — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous waste storage area prior to 1980. The soil in the area of the spill was contaminated from the spill.

01 X G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — X POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000 — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous waste storage area. Drinking water for the area is obtained by private home wells and public water supply utilizing wells within the 3-mile radius.

01 X H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — X POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 350 — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous waste storage area. The potential exists for workers at the site to come in contact with the contaminants resulting from the spill.

01 X I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — X POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000 — 04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous waste storage area. Residents utilizing groundwater, public or private, workers, and residents utilizing surface water for recreation all have a potential to become exposed to contaminants.

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(Red)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: PA | 02 SITE NUMBER: 2402

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No damage was observed or reported.

01 ☐ K. DAMAGE TO FAUNA
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

No damage was observed or reported.

01 ☐ L. CONTAMINATION OF FOOD CHAIN
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No contamination was reported.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums)
02 ☒ OBSERVED (DATE: Unknown) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000
04 NARRATIVE DESCRIPTION

An unknown amount of TCE was spilled northwest of the parking lot near the current hazardous storage area. A potential exists for groundwater and surface water bodies to be contaminated.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No damage was observed or reported.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No contamination was observed or reported.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No dumping was observed or reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 100,000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3, site visit on April 11, 1989.
Hazardous Waste Application Part A, August 18, 1980.
Smith, Paul, Brooks Instrument Division, with Michael Heffron, NUS FIT 3. Meeting. April 11, 1989.

SECTION 6

ORIGINAL (Red)

6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

1. United States Geological Survey. Telford, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1957, photorevised 1969 and 1975. Combined with Lansdale, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1957, photorevised 1969 and 1975.

2. NUS Corporation, FIT 3. Preliminary assessment; site visit. TDD No. F3-8903-42, April 11, 1989.

3. Smith, Paul, Brooks Instruments Division, with Michael Heffron, NUS FIT 3. Meeting. April 11, 1989.

4. Brooks Instruments. Hazardous Waste Permit Application Part A. August 18, 1980.

5. Bulkin, Shirley D., United States Environmental Protection Agency, Region III, to Lester Schlege, Brooks Instruments Division. Correspondence. July 20, 1981.

6. Lunsk, Lawrence, Pennsylvania Department of Environmental Resources, Division of Hazardous Waste Management, to Paul Smith, Brooks Instruments Division. Correspondence. April 20, 1984.

7. Pennsylvania Department of Environmental Resources, Bureau of Waste Management. Hazardous Waste Inspection Report. November 11, 1988.

8. Smith, Paul, Brooks Instruments Division, to United States Environmental Protection Agency, Region III. Correspondence. March 31, 1989.

9. Hickson, Bob, Hatfield Borough Water Authority, with Timothy Silar, NUS FIT 3. Telecon. July 29, 1986.

10. Pennsylvania Department of Environmental Resources. Annual Water Supply Report for Hatfield Borough Water Authority. March 1986.

11. Borchers, Harry J., North Penn Water Authority, to Garth Glenn, NUS FIT 3. Correspondence. August 1987.

12. North Penn Water Authority. North Penn Water Authority Annual Report. 1984.

13. Pennsylvania Department of Environmental Resources, Bureau of Topographical and Geologic Survey. Groundwater Inventory System for Montgomery County. August 4, 1983.

14. Richenbach, Dale, North Penn Water Authority, with Timothy Silar, NUS FIT 3. Telecon. July 30, 1986.

15. Luken, Peter, Director of North Wales Water Authority, with Timothy Silar, NUS FIT 3. Telecon. July 30, 1986.

16. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Geologic Map of Pennsylvania. 1980.

17. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Physiographic Provinces of Pennsylvania. Map 13, Third Printing. 1979.

18. Subitzky, S., Ed. Late Triassic Newark Group, North Central New Jersey and Adjacent Pennsylvania and New York. In Geology of Selected Areas in New Jersey and Eastern Pennsylvania and Guidebook of Excursions. Field Trip No. 4. New Brunswick, New Jersey: Rutgers University Press, 1969.

19. Spencer, E.W. The Appalachian Orogen. In Introduction to the Structure of the Earth. New York: McGraw-Hill Company, Incorporated, 1977.

20. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Groundwater Resources of Montgomery County, Pennsylvania. Water Resources Report 29, 1971.

21. United States Department of Agriculture, Soil Conservation Service. Soil Survey of Montgomery County, Pennsylvania. April 1967.

22. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Engineering Characteristics of the Rocks of Pennsylvania. Environmental Geology Report 1, 1982.

ORIGINAL (Red)

23. National Oceanic and Atmospheric Administration. Climatography of the United States. No. 60, Climate of Pennsylvania. June 1982.

24. Uncontrolled Hazard Waste Site Ranking System; A User's Manual. Figure 4, Mean Annual Lake Evaporation, and Figure 5, 1-Year 24-Hour Rainfall (inches). August 1982.

25. Kulp, Charles J., United States Department of the Interior, Fish and Wildlife Service, to Garth Glenn, NUS FIT 3. Correspondence. October 21, 1988.

26. Brooks Instruments. Pennsylvania Hazardous Waste Manifest. Document Number PAB01619730, July 30, 1985.

27. Smith, Paul, Brooks Instruments Division, with Michael Heffron, NUS FIT 3. Telecon. April 28, 1989.

28. Kraus, David, SMC Martin, to Paul Smith, Brooks Instruments Division. Correspondence. June 26, 1981.

APPENDIX A

Please print or type with ELITE type (12 characters/inch) in the unshaded areas only.

Form Approved OMB No. 158-S79016
GSA No. 0246-EPA-OT

3 ORIGINAL (Red)

EPA U.S. ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTALLATION'S EPA I.D. NO.

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

III. LOCATION OF INSTALLATION

1980 AUG 18 PM 9:21

PLEASE PLACE LABEL IN THIS SPACE

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law *(Section 3010 of the Resource Conservation and Recovery Act).*

DETACH A

FOR OFFICIAL USE ONLY

COMMENTS: RCRA SECTION EPA REGION III

INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr., mo., & day)
PAD002482628 T/A 21 C		80 08 18

AUG 18 80 00377

I. NAME OF INSTALLATION

ROOKS INSTRUMENT DIVISION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: 407 WEST VINE STREET

CITY OR TOWN	ST.	ZIP CODE
HATFIELD	PA	19440

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: ~~SAME~~ 407 West Vine Street

CITY OR TOWN	ST.	ZIP CODE
~~SAME~~ Hatfield	PA	19440

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)	PHONE NO. (area code & no.)
SCHLEGEL LESTER PLANT MANAGER	215-362-3641

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER: EMERSON ELECTRIC CO.

B. TYPE OF OWNERSHIP (enter the appropriate letter into box): F = FEDERAL, M = NON-FEDERAL — M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

- [ ] A. GENERATION
- [ ] B. TRANSPORTATION (complete item VII)
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only – enter "X" in the appropriate box(es))

- [ ] A. AIR
- [ ] B. RAIL
- [ ] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

ORIGINAL
(Red)

I.D. – FOR OFFICIAL USE ONLY

1.	2											13	T/A 14	C 15
W	P	A	D	0	0	2	4	8	9	6	2	8	2	1

IPTION OF HAZARDOUS WASTES *(continued from front)*

DUS WASTES FROM NON–SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.31 for each listed hazardous
n non–specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
0 0 1	F 0 0 3	F 0 1 7	F 0 1 8		
7	8	9	10	11	12

DUS WASTES FROM SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.32 for each listed hazardous waste from
lustrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

CIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four–digit number from 40 CFR Part 261.33 for each chemical sub-
r installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
0 0 2	U 1 5 1	U 2 2 8			
37	38	39	40	41	42
43	44	45	46	47	48

IFECTIOUS WASTES. Enter the four–digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary
nedical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

ERISTICS OF NON–LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non–listed
wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

☐ 1. IGNITABLE (D001) ☒ 2. CORROSIVE (D002) ☐ 3. REACTIVE (D003) ☐ 4. TOXIC (D000)

CATION

nder penalty of law that I have personally examined and am familiar with the information submitted in this and all documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, iat the submitted information is true, accurate, and complete. I am aware that there are significant penalties for sub-e information, including the possibility of fine and imprisonment.

	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
E. Schlegel	Lester E. Schlegel, Plant Manager	8/13/80

DETACH

DETACH

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F P A D 0 0 2 4 8 2 6 2 8

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS
		ORIGINAL (Red)

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8	5 7	1 0	0 1

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	500	G		7				
2	S 0 2	275	G		8				
3	T 0 1	10	U/G		9				
4					10				

the front.

SES *(continued)*

ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE ESIGN CAPACITY.

ORIGINAL
(Red)

TION OF HAZARDOUS WASTES

RDOUS WASTE NUMBER – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If yo dous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteris- e toxic contaminants of those hazardous wastes.

ANNUAL QUANTITY – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual ch **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled that characteristic or contaminant.

EASURE – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

ords use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into ppropriate density or specific gravity of the waste.

CODES:
hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III how the waste will be stored, treated, and/or disposed of at the facility.
listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess cteristic or toxic contaminant.
our spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the ght box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the spece provided on the form.

DOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by PA Hazardous Waste Number shall be described on the form as follows:
of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual f the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter with above" and make no other entries on that line.
p 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds ne shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated ear of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

). O	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
4	900	P	T 0 3 D 8 0	
2	400	P	T 0 3 D 8 0	-
1	100	P	T 0 3 D 8 0	
2				included with above

C tinued from the front.

I DESCRIPTION OF HAZARDOUS WASTES *ntinued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

ORIGINAL
(Red)

A I.D. NO. *(enter from page 1)*

F | A | D | 0 | 0 | 2 | 4 | 8 | 2 | 6 | 2 | 8 | T/A | C | 6 |

V. FACILITY DRAWING

A existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

V PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground–level)* that clearly delineate all existing structures; existing storage, t atment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

V FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
4 0 | 1 5 | 0 0 0	7 5 | 1 5 | 0 0 0

VI. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

f the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E EMERSON ELECTRIC COMPANY	3 1 4 - 5 5 3 - 2 0 0 0

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F 8100 W. Florissant Ave.	C G ST. LOUIS	M O	6 3 1 3 6

IX. OWNER CERTIFICATION

I rtify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached d uments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
Lester E. Schlegel, Plant Mgr.	Lester E. Schlegel	11/19/80

X OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the s mitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, i uding the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
I ster E. Schlegel, Plant Mgr.	Lester E. Schlegel	11/19/80

rom page 2.
tocopy this page before completing ... u have more than 26 wastes to list. Form Approved OMB No. 158-S80004

ORIGINAL (RED)

.D. NUMBER (enter from page 1)	T/A	C	FOR OFFICIAL USE ONLY			T/A	C	
0 0 2 4 8 2 6 2 8		1	W	DUP			2	DUP

...RIPTION OF HAZARDOUS WASTES *(continued)*

A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))
01	2500	P	S01	S02	T01		
28							Included with above
03	900	P	S01				
02							Included with above
~~17~~	5000	P	S01				temp. susp. FK 1/16/81
~~18~~							temp susp. FK 1/16/81 Included with above
51	50	P	S01				

510-3 (6-80) CONTINUE ON REVERSE

APPENDIX B

ORIGINAL (Red)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

JUL 20 1981

Mr. Lester E. Schlegel
Brooks Instruments Division
407 W. Vine Street
Hatfield, PA 19440

Dear Mr. Schlegel:

This is to acknowledge that the Environmental Protection Agency has completed processing the information submitted in your Part A Hazardous Waste Permit Application. It is the Agency's opinion, based on the assumption that the information submitted is complete and accurate, you as an owner or operator of a hazardous waste management facility have met the requirements of Section 3005(e) of the Resource Conservation and Recovery Act (RCRA) for Interim Status. EPA has not verified the information submitted. If it is determined that the information is incomplete or inaccurate, you may be asked to provide additional information or in certain circumstances it may be determined that you do not qualify for interim status. In addition, this notice does not preclude a citizen from taking legal action under the provisions of Section 7002 of RCRA.

A facility not meeting the requirements for interim status under Section 3005 of RCRA may be required to close until such time as a hazardous waste permit is issued. Interim status may also be terminated, according to procedures in 40 CFR Part 124, if the owner or operator fails to furnish additional information which EPA requests in order to process a permit application.

As an owner or operator of a hazardous waste management facility, you are required to comply with the interim status standards as prescribed in 40 CFR Parts 122 and 265 or with State rules and regulations in those States which have been authorized under Section 3006 of RCRA. In addition, you are reminded that operating under interim status does not relieve you from the need to comply with all applicable State and local requirements.

The enclosure to this letter identifies the processes your facility may use, their design capacities, and types of waste your facility may accept during interim status. This information was obtained from the Part A Permit Application. If you wish to handle new wastes, change processes, increase the design capacity of existing processes, or change ownership or operational control of the facility, you may do so only as provided in 40 CFR Sections 122.22 and 122.23.

ORIGINAL
(Red)

If you have any questions concerning this letter, please write to the address shown or call Bill Walsh at 215/597-1230.

Sincerely yours,

Shirley D Bulkin

Shirley D. Bulkin
Chief, Administrative Support Section
Permit Enforcement Branch

Enclosure

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY
(VERIFICATION)

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act *(RCRA)*. Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER ➤ PAD 00 248 2628

Brooks Instrument Division
407 W. Vine Street
Hatfield, PA 19440

INSTALLATION ADDRESS ➤

407 W. Vine Street
Hatfield, PA 19440

EPA Form 8700-12B (4-80)

ORIGINAL (Red)

Department of Environmental Resources
1875 New Hope Street
Norristown, PA 19401
215 270-1920

ORIGINAL (Red)

April 20, 1984

Mr. Paul Smith
Brooks Instrument Division
407 West Vine Street
Hatfield, PA 19440

Re: Identification No. PAD002482628

Dear Mr. Smith:

It has been determined by our staff that you are not a TSD facility or that you qualify under the permit by rule provision in our hazardous waste management rules and regulations.

Therefore, you will not have to submit a Part B hazardous waste permit application and we are returning your Part A application if you previously submitted one to the Department.

This means you no longer have interim status as a TSD facility and you may not engage in this type of activity at your facility. You will not be required to secure a hazardous waste management permit for your facility, but you are still subject to any portion of the hazardous waste management rules and regulations published in the Pennsylvania Bulletin September 4, 1982 which pertain to your facility. This includes the submission of a closure plan if you operated as a treatment storage or disposal facility after November 19, 1980.

If you qualify under the permit by rule provision of the regulations then you may continue to operate as a hazardous waste facility in accordance with NPDES or local sewer authority requirements.

This does not release you from Environmental Protection Agency requirements. You will have to contact their Philadelphia Regional Office to verify that you do not have to submit a Part B application to their agency.

If you have any questions concerning this, I can be reached at the above number.

Very truly yours,

LAWRENCE H. LIENSK
Solid Waste Facilities Supervisor

cc: Hatfield Borough
Montgomery County Planning Commission
Field Supervisor
Division of Hazardous Waste Management
U.S. EPA Code 3A/32
Re 30 B(5)

Content 11/05/84

APPENDIX C

SMC-MARTIN

A Subsidiary of Science Management Corporation
ENGINEERING • PLANNING • SCIENCE • SURVEYING

900 WEST VALLEY FORGE RD. • P.O. BOX 859 • VALLEY FORGE, PA. 19482
(215) 265-2700 • (215) 783-7480

ORIGINAL (Red)

June 26, 1981
Ref: 5721-040-26017

Brooks Instrument
407 W. Vine Street
Hatfield, PA 19440

Attention: Paul Smith

Dear Paul:

Per our conversation of June 25, I have enclosed a copy of my letter of May 27 to Joseph A. Feola of DER regarding the reactivation of Well #3.

The well construction details of the three monitor wells are as follows:

- Monitor Well #1 - 126' TD, 6-inch diameter < 1 gpm.
- Monitor Well #2 - 140' TD, 6-inch diameter 2 gpm.
- Recovery Well #3 - 327' TD, 6-inch diameter — 39 gpm.

Pump setting 2

Should you require any further information, please do not hesitate to call.

Very truly yours,

SMC-MARTIN

David L. Kraus
Hydrogeologist

DLK:rm
Enclosure

ORIGINAL
(Red)

March 31, 1989

United States Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, PA 19107

Gentlemen:

Enclosed is a topographic map showing Brooks Instrument and the Solvent Storeage areas.

The present SWMU is constructed of a shed roof and an impoundment area of asphalt floor and concret walls approximately 10" high serving as a dike. This is a drum storeage area. Waste is not stored for more than 90 days in this area. This area has been in operation since 1980 approximately. There has not been any releases from this unit.

I have included a typical Pennsylvania DER quarterly report which shows typical wastes and quantities.

Brooks did have a spill prior to 1980 of TCE. An air stripper is in operation 24 hours per day. I have included a lab report showing the air strippers performance.

I have tried to answer the questions to the best of my ability. Please contact me at 362-3581, if I can be of any further help.

Best Regards,

Paul M. Smith

Paul M. Smith

Enclosure

PS:lm

EMERSON®

BROOKS INSTRUMENT DIVISION
EMERSON ELECTRIC CO.
HATFIELD, PENNSYLVANIA 19440
(215) 362-3500 • Telex 497-5082
FAX: (215) 362-3745

: REV:9/87
ype or Print in Ink

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WASTE MANAGEMENT
P.O. Box 2063
Harrisburg, PA 17120

ORIGINAL
55

QUARTERLY HAZARDOUS WASTE REPORT — GENERAL INFORMATION

This report is for the quarter ending (check one):

- [x] March 31
- [ ] June 30
- [ ] September 30
- [ ] December 31

19 88 Yr.

Your EPA I.D. Number | P | A | D | 0 | 0 | 2 | 4 | 8 | 2 | 6 | 2 | 8 |

[ ] Check this block, if there is nothing to report this quarter.

Name of Installation BROOKS INSTRUMENT DIVISION

Mailing Address 407 W. VINE STREET
HATFIELD, PA. 19440

Location Address SAME

within PA, HATFIELD (Name of Municipality) [ ] City [x] Borough [ ] Township (Check one) MONTGOMERY County

Contact Person PAUL M. SMITH

Phone No. 215 (Area Code) - 362 - 3581

TIFICATION

certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, nd complete. I am aware that there are significant penalties for submitting false information including he possibility of fine and imprisonment.

f I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity f waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the resent and future threat to human health and the environment; OR, if I am a small quantity generator, have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

A. Print or Type Name	B. Signature of Authorized Representative	C. Date Signed
PAUL M. SMITH	Paul M. Smith	April 14, 1988

Type or Print in Ink

DEPARTMENT OF ENVIRONMENTAL [illegible]
BUREAU OF WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

bbA

ORIGINAL (Red)

pur EPA I.D. No. PAD002482628

TSD Facility's EPA I.D. No. NYD057770109

TSD Facility's Name NORTHEAST ENVIRONMENTAL SERVICES, INC.

ddress CANAL RD. WAMPSVILLE, NY. 13163

WASTE SHIPPED OFF-SITE

A. US DOT Proper Shipping Name of Waste and State Manifest Document Number (include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment and Unit of Measure (P-pounds, T-ton, K-kilograms, M-metric ton) DO NOT ENTER GALLONS	Put "X" in Box	D. PA. Hazardo Waste Transp License No
US DOT Description- WASTE FLAMMABLE LIQUID, NOS FLAMMABLE LIQUID UN1993 State Manifest Document Number - NYA 5331591	F003 F005	1995 P	K X P T M	AH01
US DOT Description- WASTE ORM-A NOS ORM-A NA1693 State Manifest Document Number - NYA 5331591	F001	665 P	K X P T M	AH01
US DOT Description- State Manifest Document Number -			K P T M	AH
US DOT Description- State Manifest Document Number -			K P T M	AH
US DOT Description- State Manifest Document Number -			K P T M	AH
US DOT Description- State Manifest Document Number -			K P T M	AH
US DOT Description- State Manifest Document Number -			K P T M	AH
US DOT Description- State Manifest Document Number -			K P T M	AH
US DOT Description- State Manifest Document Number -			K P T M	AH

ents:

ev. 9/87
or Print in Ink

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

ORIGINAL (Red)

Your EPA I.D. No. PAD002482628
SD Facility's EPA I.D. No. NJ0002454544
SD Facility's Name MARISOL INC.
Address 125 FACTORY LANE, MIDDLESEX, N.J. 08846

WASTE SHIPPED OFF—SITE

A. US DOT Proper Shipping Name of Waste and State Manifest Document Number (include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment and Unit of Measure (P-pounds, T-ton, K-kilograms, M-metric ton) DO NOT ENTER GALLONS	Put "X" in Box	D. PA./ Hazardous Waste Transp License No
US DOT Description- WASTE TRICHLOROETHELENE MIXTURE RQ ERM-A UNI710 State Manifest Document Number - NJA 0361313	F001	1,148 P	K X P T M	A H 0 1
US DOT Description- State Manifest Document Number -			K P T M	A H
L DOT Description- State Manifest Document Number -			K P T M	A H
L DOT Description- State Manifest Document Number -			K P T M	A H
US DOT Description- Manifest Document Number -			K P T M	A H
S DOT Description- State Manifest Document Number -			K P T M	A H
S DOT Description- State Manifest Document Number -			K P T M	A H
US DOT Description- State Manifest Document Number -			K P T M	A H
IS DOT Description- State Manifest Document Number -			K P T M	A H
JS DOT Description- State Manifest Document Number -			K P T M	A H

BCM Laboratory Division
1850 Gravers Road
Norristown, PA 19401
(215) 275-0281

PLEASE REMIT CHECKS TO:
BCM Eastern Inc.
1 PLYMOUTH MEETING
PLYMOUTH MEETING, PA 19462
215-825-3800

ORIGINAL (RED)

FINAL REPORT

This is a final report.
The results have been checked and authorized for release.

CLIENT

Brooks Instruments Division
Attn: Paul Smith
407 West Vine Street
Hatfield, PA 19440

Date : 03/27/89
BCM # : 00-7011-41
P.O.# :
Order# : 26726

BCM Number : 907321
Location : WELL #1
Client ID :

Date Sampled : 03/11/89
Date Received : 03/14/89
Sampler :

Test Description	Results	Units	Test Method
..ichloroethylene/Perchlorethylene by J. DENNING on 03/18/89			EPA # 8010
Tetrachloroethene (PCE)	4.9	ug/l	
Trichloroethene (TCE)	78.1	ug/l	

BCM Laboratory Division
1850 Gravers Road
Norristown, PA 19401
(215) 275-0281

FINAL REPORT

PLEASE REMIT CHECKS TO:
BCM Eastern Inc.
1 PLYMOUTH MEETING
PLYMOUTH MEETING, PA 19462
215-825-3800

ORIGINAL (Red)

This is a final report.
The results have been checked and authorized for release.

CLIENT

Brooks Instruments Division
Attn: Paul Smith
407 West Vine Street
Hatfield, PA 19440

Date : 03/27/89
BCM # : 00-7011-41
P.O.# :
Order# : 26726

BCM Number : 907319
Location : STRIPPER IN
Client ID :

Date Sampled : 03/11/89
Date Received : 03/14/89
Sampler :

Test Description	Results	Units	Test Method
Trichloroethylene/Perchloroethylene by J. DENNING on 03/18/89			EPA # 601
Tetrachloroethene (PCE)	3.3	ug/l	
Trichloroethene (TCE)	61.7	ug/l	

BCM Laboratory Division
1850 Gravers Road
Norristown, PA 19401
(215) 275-0281

PLEASE REMIT CHECKS TO:
BCM Eastern Inc.
1 PLYMOUTH MEETING
PLYMOUTH MEETING, PA 19462
215-825-3800

ORIGINAL (Red)

FINAL REPORT

This is a final report.
The results have been checked and authorized for release.

CLIENT

Brooks Instruments Division
Attn: Paul Smith
407 West Vine Street
Hatfield, PA 19440

Date : 03/27/89
BCM # : 00-7011-41
P.O.# :
Order# : 26726

BCM Number : 907320
Location : STRIPPER OUT
Client ID :

Date Sampled : 03/11/89
Date Received : 03/14/89
Sampler :

Test Description	Results	Units	Test Method
ichloroethylene/Perchlorethylene by J. DENNING on 03/18/89			EPA # 601
Tetrachloroethene (PCE)	< 1	ug/l	
Trichloroethene (TCE)	< 1	ug/l	

9001-25-05

NUS CORPORATION
999 WEST VALLEY ROAD
WAYNE, PENNSYLVANIA 19087
215-687-9510

ORIGINAL (Red)

February 16, 1990
C-585-2-0-31
68-01-7346

Mr. Lawrence Sikorski, Supervisor
Maintenance, Safety, and Security
Technitrol, Incorporated
1952 East Alleghney Avenue
Philadelphia, Pennsylvania 19134

Subject: Request for Site Access
TDD No. F3-9001-25
Technitrol, Incorporated
Philadelphia, Pennsylvania

Dear Mr. Sikorski:

This letter is in response to your discussion with Janis Hottinger, of this office, on February 14, 1990. NUS Corporation is under Contract No. 68-01-7346 to provide technical and management services to the United States Environmental Protection Agency (EPA). We have received a work assignment to perform a site investigation as outlined below.

Please consider this a formal request for obtaining site access for March 22, 1990 to the Technitrol, Incorporated property in Philadelphia, Pennsylvania. The purpose of this request is to conduct a preliminary assessment of the property in order to assess the need for further action by EPA. Work to be performed at the property consists of walking the area, observing the on-going procedures, taking photographs, and obtaining background information regarding waste-handling practices.

The statutory basis for this inspection is contained in the attached Letter of Introduction, provided by EPA for the project team leader, Janis Hottinger. If there are any questions, please do not hesitate to contact Ms. Hottinger, Paul Persing, or me.

Respectfully,

Andrew Frebowitz
Assistant Manager, FIT 3

AF/nmd

Attachment

9001-25-03

NUS CORPORATION
999 WEST VALLEY ROAD
WAYNE, PENNSYLVANIA 19087
215-687-9510

ORIGINAL (Red)

January 29, 1990
T-585-1-0-87
68-01-7346

Mr. Anthony Dappolone
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107

Dear Mr. Dappolone:

Attached please find the sampling plan for Brooks Instrument Division, prepared under TDD No. F3-9001-25.

Please endorse below confirming that you have received the attached subject data and return the form to the above address.

Sincerely,

Garth Glenn / nmd
Garth Glenn
Regional Operations Manager,
FIT 3

GG/nmd

Attachments

Signature: _____
Anthony Dappolone

Date: 1/30/90

9001-25-01

NUS CORPORATION
999 WEST VALLEY ROAD
WAYNE, PENNSYLVANIA 19087
215-687-9510

ORIGINAL (Red)

January 29, 1990
R-585-1-0-46
68-01-7346

Mr. Anthony Dappolone
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107

Subject: Sampling Plan
TDD No. F3-9001-25
EPA No. PA-2402
Brooks Instruments Division
Hatfield, Mongromery County, Pennsylvania

Dear Mr. Dappolone:

Submitted herewith is a sampling plan for the subject site. The site inspection will be tentatively scheduled for February 14, 1990. Permission for site access will be obtained from Paul Smith, the manager of the facility. Tim Sheehan, of the Pennsylvania Department of Environmental Resources (PA DER), will be notified of the investigation.

Summary

Brooks Instruments Division is a manufacturer of small precision instruments, including control valves, water meters, and flow meters. The pieces for the instruments are dipped in a solvent tank for degreasing. The waste solvent is drummed and stored in a hazardous waste storage area for less than 90 days.

The facility is located on approximately 5 acres of land and consists of one 400,000-square-foot building, a maintenance shed, and a small pond. The facility has operated at this location since 1957. Sometime in 1979 or 1980 (the exact date is unknown), a trichloroethene (TCE) spill occurred on site. The amount spilled is unknown. The spill resulted in groundwater contamination of the area. An air stripper and recovery well, installed by Brooks in 1981, are located behind the waste storage area. They are used to remove TCE from groundwater pumped from the recovery well. The stripper's outfall is registered by the Delaware Valley Water Authority (No. 011577) because of the large amount of water discharged indirectly into the Delaware River.

Other waste generated at the facility includes the spent solvents xylene, toluene, and acetone. Currently, wastes on site are stored in a fenced area adjacent to the maintenance shed, north of the main building. Storage in this area began in 1980. Before 1980, wastes were stored under an extension of the western portion of the main building, where virgin TCE is currently stored. A TCE storage tank, with a holding capacity of 275 gallons, is located adjacent to and behind the main building. The tank is located above ground within a diked concrete basin.

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Two monitoring wells (MWs) are located on site. MW no. 2 is located west of the air stripper and is 140 feet deep. MW no. 1 is located in the northwestern part of the subject site and is 126 feet deep. Monitoring well no. 2, closest to the air stripper, is located directly on the area of the TCE spill. Samples of both wells are taken quarterly by BCM Laboratory, and the results are sent to PA DER. In addition, the recovery well is also sampled before and after air stripping. The recovery well is 327 feet deep and pumps 43,000 gallons per day through the air stripper. Water from the air stripper is discharged into the on-site pond. The air stripper is operated 24 hours a day.

approximately

Geology Information

The Brooks Instruments Division site is situated within the Triassic Lowlands Section of the Piedmont Physiographic Province. The rocks of this Triassic Section are more commonly known as the Newark Group, a 16,000- to 20,000-foot section of nonmarine sedimentary rocks and associated intrusive and extrusive basic rocks. The Newark Group was deposited in the Newark Basin, which was part of a fracture system initiated by the widening of the Atlantic Basin and separation of the continents in Mesozoic time. The site area has dendritic drainage pattern and a topography of broad, shallow valleys and rolling hills.

Groundwater Information

The Brunswick Formation has a moderate to low permeability and a moderate secondary porosity due to vertical joints and bedding-plane fractures that have been enlarged by solution. The Brunswick contains water under water-table and semi-artesian conditions in the weathered zone of the formation, which may extend to 600 feet or more. Wells in the Brunswick in Montgomery County range in depth from 90 to 916 feet. Well yields range from 24 to 220 gallons per minute (gpm), with an average of 40 gpm.

Sampling to date

Sampling of the wells is conducted quarterly by BCM, Incorporated. Results of samples collected on March 27,1989 indicated the following: MW no.1 showed TCE concentrations of 78.1 ug/l; the recovery well showed TCE concentrations of 61.7 ug/l before the air stripper and 4 ug/l after the air stripper; and MW no. 2 showed TCE concentrations of 1,040 ug/l. It is believed that more recent data are available: however, they are not available to FIT 3 at this time.

Proposed Sampling Plan

The proposed sampling locations include the following:

- Aqueous samples should be obtained from MW no. 1, MW no. 2, and the recovery well (before and after air stripping). Filtered samples should also be obtained from all MWs sampled.
- Two surface and two subsurface soil samples should be collected from the TCE spill area.
- A background soil sample should be collected.
- A sediment sample should be collected from the on-site pond

The total number of samples to be obtained is nine solids, six aqueous, and four filtered aqueous, including duplicates and blanks. Sample analysis will be performed for routine Contract Laboratory Program organic and inorganic parameters. All samples will be obtained in accordance with standard protocol as indicated on the site-specific work plan.

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Michael McCarthy has been appointed project manager and will be responsible for the sampling plan.

Please endorse below and return with your approval or amendments to this plan. If you have any questions, please feel free to contact either Andrew Frebowitz, Michael Heffron, or Mr. McCarthy.

Respectfully,

Andrew Frebowitz	Michael Heffron	Patricia L. Armstrong for Kim Walters
Assistant Manager	Section Supervisor	Quality Assurance

TF/sw

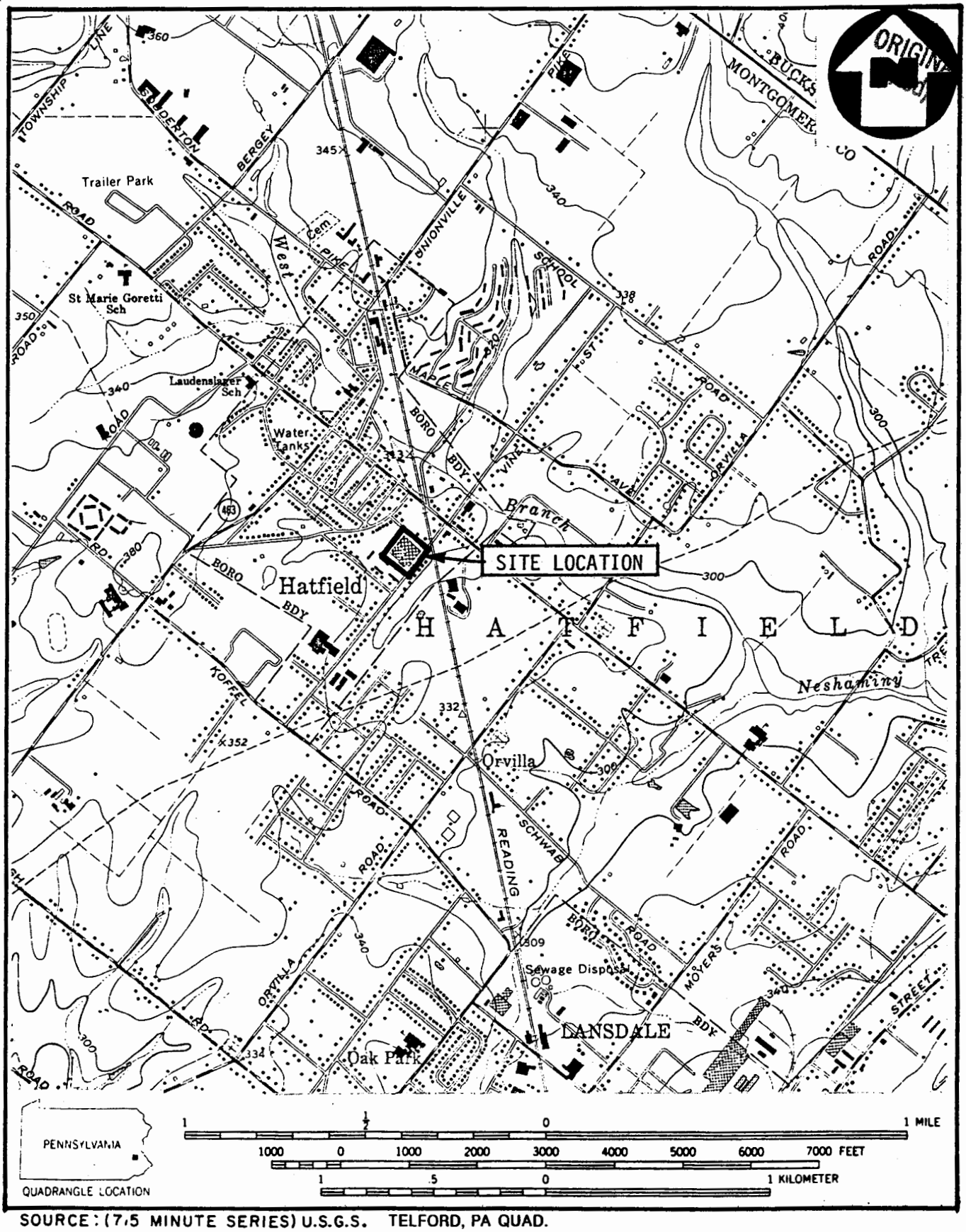
Attachments

Approved by: ____________________

Date: ____________________

Amendments: ____________________

on hold pending North Penn Investigation Rynnette Elvan



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. TELFORD, PA QUAD.

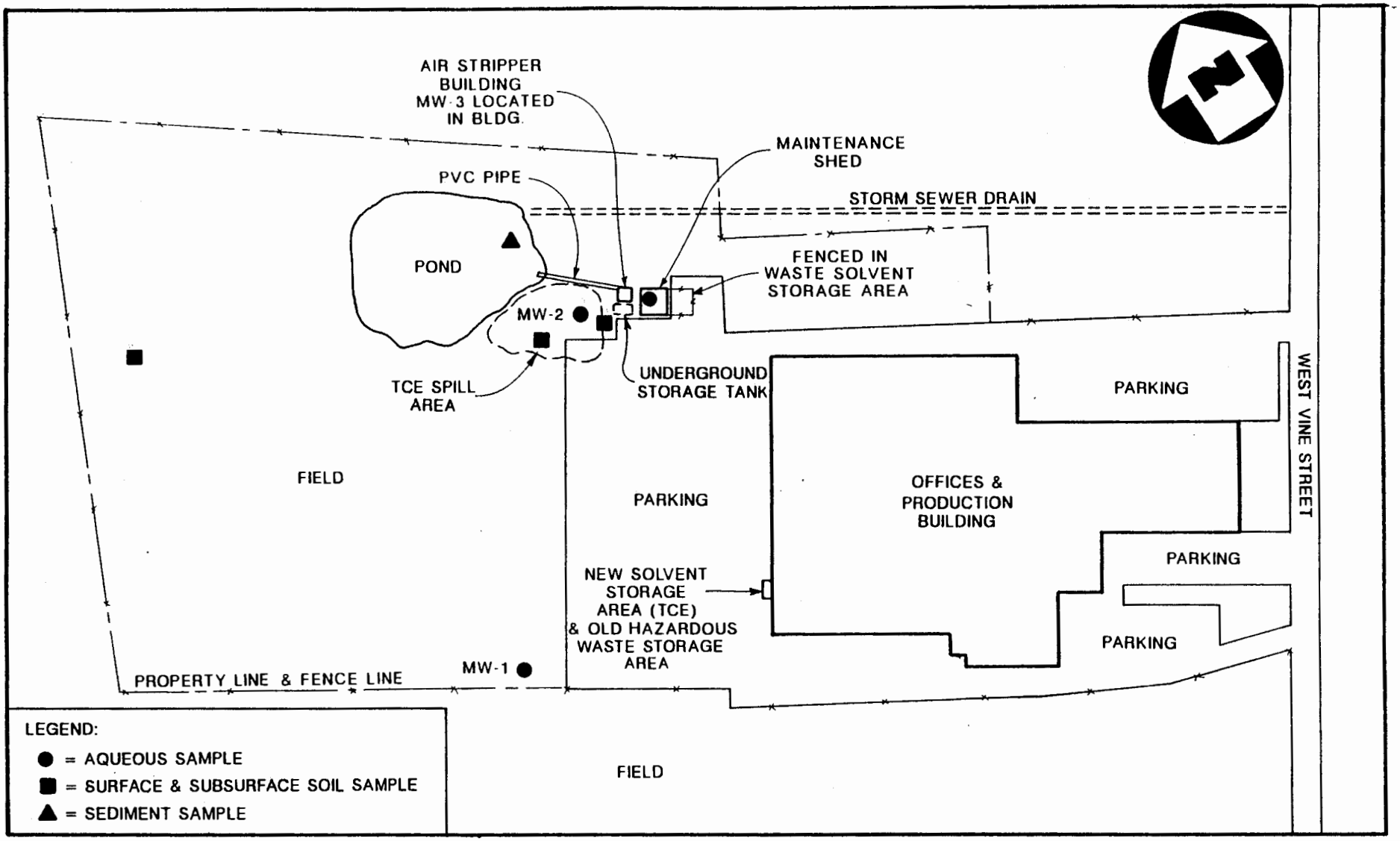
SITE LOCATION MAP

BROOKS INSTRUMENTS DIVISION, HATFIELD, PA

SCALE 1: 24000

FIGURE 1

NUS CORPORATION



PROPOSED SAMPLE LOCATION MAP

BROOKS INSTRUMENTS DIVISION, HATFIELD, PA

(NO SCALE)

FIGURE 2

ORIGINAL (Red)

NUS CORPORATION